

Serial No. 10/681,546
Filed: October 8, 2003
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In the Claims:

Please amend claims 1 and 15-21, and cancel claims 13 and 14 as follows:

1. (Currently Amended) A Mmethod for manufacturing components
a hub, in particular for bicycles and the like, comprising the following steps:

- providing a winding device comprising at least a first shaping device;
- applying a predetermined quantity of fibers on said first shaping device;
- applying at least a first cross-linking agent to at least part of the fibers;
- inserting said first shaping device into a second shaping device;
- spaciallyspatially-expanding of said first shaping device including at least said
fibers and at least said first cross-linking agent toward said second shaping device, wherein
said shaping devices are matched to one another such that an expanded body comprising the
fibers and the cross linking agent exhibits a substantially uniform thickness; and
- removing the expanded body from said second shaping device;
- using said expanded body as a body blank;
- providing a third shaping device;
- depositing a predetermined quantity of fibers on said third shaping device;
- applying at least a second cross-linking agent to at least part of said second
fibers; and

inserting said third shaping device into said body blank and bonding at least said second fibers and said cross-linking agent with said body blank.

2. (Original) The method of claim 1, characterized in that the distance between said first shaping device and said second shaping device is substantially constant prior to expansion of said first shaping device.

3. (Original) The method of claim 1, characterized in that in a further process step said first shaping device is removed from the expanded body.

4. (Original) The method of claim 1, characterized in that prior to depositing the fibers, said first shaping device is pushed on to a core that preferably contains metal.

5. (Original) The method of claim 4, characterized in that after depositing the fibers, said core containing a metal is removed from said first shaping device.

6. (Original) The method of claim 1, characterized in that said first shaping device at least partially consists of a flexible material.

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7. (Original) The method of claim 1, characterized in that expansion of said first shaping device is effected by varying at least one thermodynamic state variable, preferably the temperature or the pressure.

8. (Original) The method of claim 1, characterized in that said second shaping device comprises at least two shaping elements with internal contours that are substantially symmetrical relative to each other.

9. (Original) The method of claim 1, characterized in that elevation of the temperature causes the fibers to cross-link with the cross-linking agent.

10. (Original) The method of claim 1, characterized in that the fiber comprises a material selected from a group of materials including carbon, glass, aramide, polyester, Diolen and the like.

11. (Original) The method of claim 1, characterized in that the fiber is joined to form a fiber fabric which is wound around said first shaping device.

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12. (Original) The method of claim 1, characterized in that the cross-linking agent is selected from a group of cross-linking agents including resins such as epoxy resins, polyurethane, polyester, vinylester and the like.

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) The method of claim ~~13~~1, characterized in that elevation of the temperature causes the fibers to cross-link with the cross-linking agent.

16. (Currently Amended) The method of claim ~~13~~1, characterized in that in a further process step, the expanded body and said third shaping device with said second fibers are clamped to each other.

17. (Currently Amended) The method of claim ~~13~~1, characterized in that said third shaping device has an outer contour that substantially corresponds to the inner contour of the hub to be manufactured.

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18. (Currently Amended) The method of claim ~~13~~1, characterized in that the fiber comprises a material selected from a group of materials including carbon, glass, aramide, polyester, Diolen and the like.

19. (Currently Amended) The method of claim ~~13~~1, characterized in that the fibers are joined to form a fiber fabric which is wound around said third shaping device.

20. (Currently Amended) The method of claim ~~13~~1, characterized in that said cross-linking agent is selected from a group of cross-linking agents including resins such as epoxy resins, polyurethane, polyester, vinylester and the like.

21. (Currently Amended) A Method for manufacturing a hub for bicycles and the like, comprising the following steps:

- providing a winding device comprising at least a first shaping device;
- applying a predetermined quantity of fibers on said first shaping device;
- applying at least a first cross-linking agent to at least part of the fibers;
- inserting said first shaping device into a second shaping device;

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~~spacially~~ spatially expanding of said first shaping device with at least said fibers and at least said first cross-linking agent toward said second shaping device, wherein said shaping devices are matched to one another such that an expanded body comprising the fibers and the cross-linking agent exhibits substantially uniform thickness; and
removing said expanded body from said second shaping device.

22. (Original) A hub, in particular for bicycles and the like, characterized in that said hub exhibits an external body having a substantially uniform thickness.

23. (Original) The hub of claim 17, characterized in that said hub has openings at its end portions that are substantially equally spaced apart from each other in the peripheral direction.